

NINDS CDE Notice of Copyright
Spinal Cord Independence Measure

Availability:	The SCIM III is freely available in the following publication: Catz, A., Itzkovich, M., et al. (1997). "SCIM-spinal cord independence measure: a new disability scale for patients with spinal cord lesions." Spinal Cord 35(12): 850–856.
Classification:	Supplemental-Highly Recommended: Spinal Cord Injury (SCI) Exploratory: SCI-Pediatric (up to 18 years)
Short Description of Instrument:	Construct measured: Function, Activities of Daily Living Generic vs. disease specific: Disease specific Intended respondent: The measure was developed as a performance measure but has also been used in an interview (with participant) and self-report format. # of items: 19
Comments/Special instructions:	Scoring: The most recent version of the SCIM (SCIM III) is comprised of 19 items in three sub-scales, which are 1) self-care (6 items, sub-score 0–20), 2) respiration and sphincter management (4 items, sub-score 0–40), and 3) mobility (9 items, sub-score 0–40). The total score ranges from 0–100. Mobility is sub-divided into “room and toilet” and “indoors and outdoors”. The items are weighted in terms of their assumed clinical relevance. Background: The SCIM is an SCI specific measure of basic functional independence. The SCIM III is scored by observation or interview. A self-report version (SCIM-SR) of the SCIM III has been validated in German (Fekete et al. 2013). There is no training manual as instructions are on the worksheet. However, it has been recommended that a reference manual be developed to describe how to score variable situations. SCI-Pediatric-specific: There are no reported psychometric studies of the SCIM-III with youth with SCI. A current multi-center study is under way.

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Rationale/ Justification:	<p>Psychometric Properties: This test has undergone extensive psychometric testing in SCI.</p> <p>Reliability: Internal consistency (Cronbach's $\alpha=0.77-0.91$); Inter-rater reliability for SCIM total (ICC=0.956), for the subscales: self-care (ICC=0.941), respiration/sphincter (ICC=0.844), mobility in the room (ICC=0.961), mobility indoors/outdoors (ICC=0.945).</p> <p>Validity: Correlation of the SCIM III with the FIM (Pearson's $r=0.779-0.91$).</p> <p>Responsiveness: When comparing the ability to detect a 1-point change from admission to discharge, the SCIM-III detected more numerous changes than FIMTM in 3 of the 4 areas; self-care, respiration and sphincter management, and mobility indoors and outdoors, but NOT mobility in the room and toilet. The differences between the 2 scales' responsiveness to changes are not statistically significant.</p> <p>Floor/ceiling effects: Ceiling effects have been observed in 3 items, floor effects have been observed in 11 items.</p>
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References:	<p>Key Reference:</p> <p>Catz, A., Itzkovich, M., Agranov, E., Ring, H., & Tamir, A. (1997). SCIM--spinal cord independence measure: a new disability scale for patients with spinal cord lesions. <i>Spinal Cord</i>, 35(12), 850–856.</p> <p>Reliability and Validity:</p> <p>Anderson, K. D., Acuff, M. E., Arp, B. G., Backus, D., Chun, S., Fisher, K., . . . Zanca, J. M. (2011). United States (US) multi-center study to assess the validity and reliability of the Spinal Cord Independence Measure (SCIM III). <i>Spinal Cord</i>, 49(8), 880–885.</p> <p>Bluvstein, V., Front, L., Itzkovich, M., Aidinoff, E., Gelernter, I., Hart, J., . . . Catz, A. (2011). SCIM III is reliable and valid in a separate analysis for traumatic spinal cord lesions. <i>Spinal Cord</i>, 49(2), 292–296.</p> <p>Catz, A., Itzkovich, M., Tesio, L., Biering-Sorensen, F., Weeks, C., Laramée, M. T., . . . Ronen, J. (2007). A multicenter international study on the Spinal Cord Independence Measure, version III: Rasch psychometric validation. <i>Spinal Cord</i>, 45(4), 275–291.</p> <p>Fekete, C., Eriks-Hoogland, I., Baumberger, M., Catz, A., Itzkovich, M., Luthi, H., . . . Brinkhof, M. W. (2013). Development and validation of a self-report version of the Spinal Cord Independence Measure (SCIM III). <i>Spinal Cord</i>, 51(1), 40–47.</p> <p>Glass, C. A., Tesio, L., Itzkovich, M., Soni, B. M., Silva, P., Mecci, M., . . . Catz, A. (2009). Spinal Cord Independence Measure, version III: applicability to the UK spinal cord injured population. <i>J Rehabil Med</i>, 41(9), 723–728.</p> <p>Invernizzi, M., Carda, S., Milani, P., Mattana, F., Fletzer, D., Iolascon, G., . . . Cisari, C. (2010). Development and validation of the Italian version of the Spinal Cord Independence Measure III. <i>Disabil Rehabil</i>, 32(14), 1194–1203.</p> <p>Itzkovich, M., Gelernter, I., Biering-Sorensen, F., Weeks, C., Laramée, M. T., Craven, B. C., . . . Catz, A. (2007). The Spinal Cord Independence Measure (SCIM) version III: reliability and validity in a multi-center international study. <i>Disabil Rehabil</i>, 29(24), 1926–1933.</p>
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